doi:10.7289/V57H1GJS

PIFSC Report on the American Samoa Longline Fishery Year 2013[1]

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During 2013, the American Samoa longline fishery continued to experience very challenging conditions with respect to declining catch of its primary target species, albacore tuna. This was also the case for most other marketable species. However, increasing catches of species, such as mahimahi, wahoo and yellowfin tuna, may indicate the beginning of an adaptation of this fishery to target species that fetch better prices in local fresh fish markets than at the cannery in Pago Pago, where albacore are landed. A summary of the fishery's catch and effort statistics for calendar year 2013, based on date of haul, is provided in Table 1.

Table 1 was derived from all logbook data submitted to the American Samoa Department of Marine and Wildlife Resources, by the February 19, 2014. Although the annual closing date for this report was moved forward slightly this year for a number of reasons, Table 1 reflects what appears to have been 100% of sets made during the year. A total of 3,324 sets in 2013 have been reported from longline vessels through March 10, 2014.

In 2013, the American Samoa longline fleet reported about 80% of the fishing effort reported in 2012. There were only 22 active vessels, 12% less than 2012 (Fig. 1). Only large (>50ft in length) vessels participated in the fishery. These vessels made 3,324 sets and deployed 9,917,249 hooks, which was 21% fewer sets (Fig. 2) and 18.1% less hooks set (Fig. 3), than in 2012. However, there was a more intensive level of effort in terms of hooks per set densities, which increased to 2,983 hooks/set during 2013 (3.7% more than the 2,877 hooks/set registered in 2012). Increasing the number of hooks per set is common in longline fisheries attempting to improve catch per day of operation. Shorter trip lengths (fewer sets per trip), also reported in 2013, may be an adaptation to reduce fuel costs.

With the exception of yellowfin tuna and mahimahi, the number of fish caught decreased for all species, individually and as a whole, in comparison with 2012. A total of 177,627 fish were caught (all species combined), which was 38% less than in 2012. The main target species, albacore tuna, dominated the catch as usual (62% of the total), the 117,555 fish caught in 2013 represents a 34.4% reduction from 179,282 albacore caught in 2012 (Fig. 5). Other species and groups that registered reduced catches during 2013 included: skipjack tuna (77.8% below the 2012 catch), bigeye tuna (down 45.7%), wahoo (12.5%), and billfishes (21.8%). There were increases in the catch of yellowfin tuna (up 30.9%) and mahimahi (up 71.5%). The decrease in shark catch (down by 45.6%) may have represented an effort by the fishery to avoid this un-retained nuisance bycatch in accordance with NMFS policy.

The overall catch per unit of effort (CPUE, number of fish of all species per 1000 hooks) decreased appreciably (24.3%) in 2013, compared with 2012. The 2013 fishery caught an average of just 17.9 fish/1000 hooks, as opposed to 23.7 fish/1000 hooks in the previous year (Fig. 7). CPUE increased for yellowfin, wahoo and mahimahi, each a minor component of the catch, while CPUE for other species decreased. CPUE of albacore, the primary target species, decreased by 20% (Fig. 8) and CPUE for the second most targeted species, skipjack tuna decreased 73%. Other non-targeted species showed decreased CPUE, including bigeye tuna (decreased 33.9%) and billfishes (decreased 3.1%). Shark CPUE also decreased (32.8%, Fig. 10). A few minor species showed increased CPUE, such as wahoo (6%),

[1] PIFSC Data Report DR-14-006
Issued 14 March 2014

mahimahi (108.3%) and yellowfin tuna (59.5%, Fig. 9) which are increasingly marketed in the local fresh fish market. However, despite the improvements in some minor components of the catch, the outstanding characteristic of the fishery in 2013 was the sustained decline in fishing activity and albacore landings, resulting in a very poor year for the American Samoa longline fishery.

Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during calendar year 2013 based on longline logbooks by the annual posting date (February 19, 2014.)

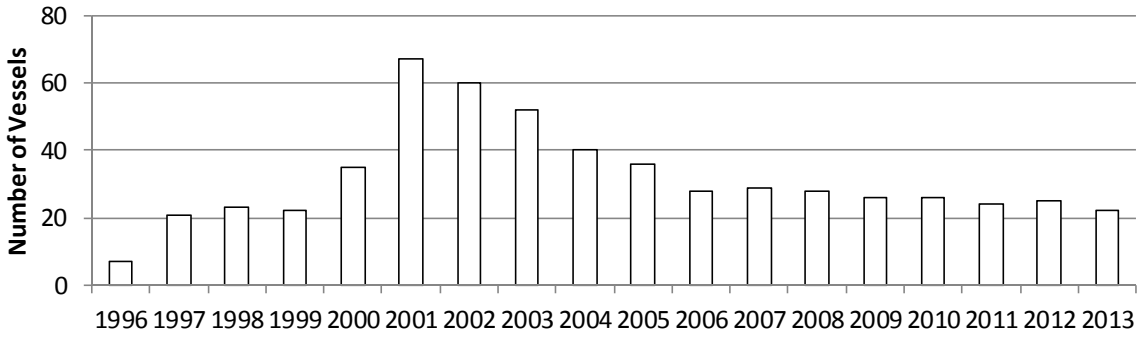
TRIP INFORMATION

Number of Vessels:	22
Number of Trips:	96
Number of Sets:	3,324
1000's of Hooks Set:	9,917
Number of Light Sticks Used:	4,211

CATCH INFORMATION

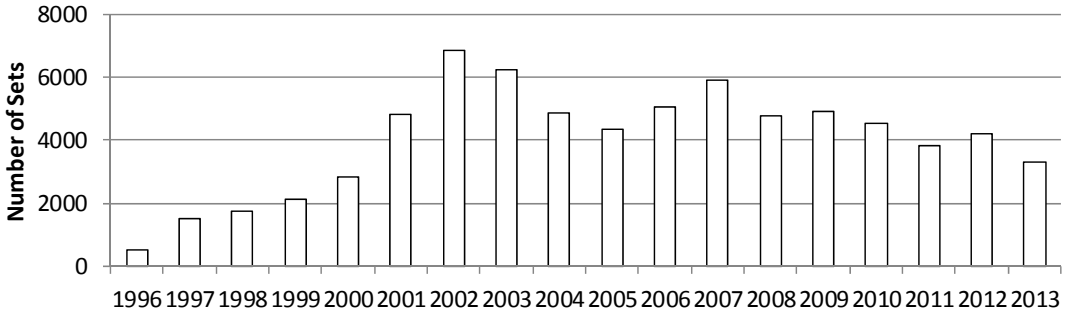
Species	Number Caught	Number Kept	Number Released	Number Caught per 1000 Hooks
BILLFISH				
Black marlin	11	3	8	0.00
Blue marlin	1,335	493	842	0.13
Striped marlin	257	108	149	0.03
Sailfish	281	49	232	0.03
Spearfish	867	56	811	0.09
Swordfish	288	180	108	0.03
TOTAL BILLFISH	**3,039**	**889**	**2,150**	**0.31**
SHARKS				
Blue shark	2,159	24	2,135	0.22
Shortfin mako shark	270	0	270	0.03
Thresher shark	202	0	202	0.02
White tip oceanic shark	663	12	651	0.07
Sharks (unknown)	538	4	534	0.05
TOTAL SHARKS	**3,832**	**40**	**3,792**	**0.39**
TUNA				
Albacore tuna	117,555	117,220	335	11.85
Bigeye tuna	4,247	4,121	126	0.43
Bluefin tuna	21	21	0	0.00
Skipjack tuna	11,540	11,138	402	1.16
Yellowfin tuna	19,096	18,864	232	1.93
TOTAL TUNA	**152,459**	**151,364**	**1,095**	**15.37**
OTHER PELAGICS				
Mahimahi	2,444	1,846	598	0.25
Moonfish	372	98	274	0.04
Oilfish	6,767	67	6,700	0.68
Pomfret	840	73	767	0.08
Wahoo	6,950	5,715	1,235	0.70
TOTAL OTHER PELAGICS	**17,373**	**7,799**	**9,574**	**1.75**
NON-PMUS				
Pelagic fishes (unknown)	924	3	921	0.09
TOTAL NON-PMUS	**924**	**3**	**921**	**0.09**
TOTAL ALL SPECIES	**177,627**	**160,095**	**17,532**	**17.91**

Figure 1. American Samoa Longline Vessels by Year



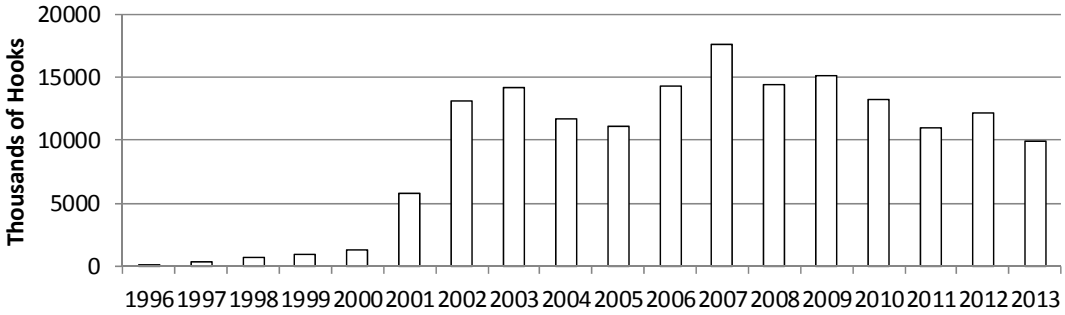
Year	Boats
1996	7
1997	21
1998	23
1999	22
2000	35
2001	67
2002	60
2003	52
2004	40
2005	36
2006	28
2007	29
2008	28
2009	26
2010	26
2011	24
2012	25
2013	22

Figure 2. Number of Sets by American Samoa Longline Vessels by Year



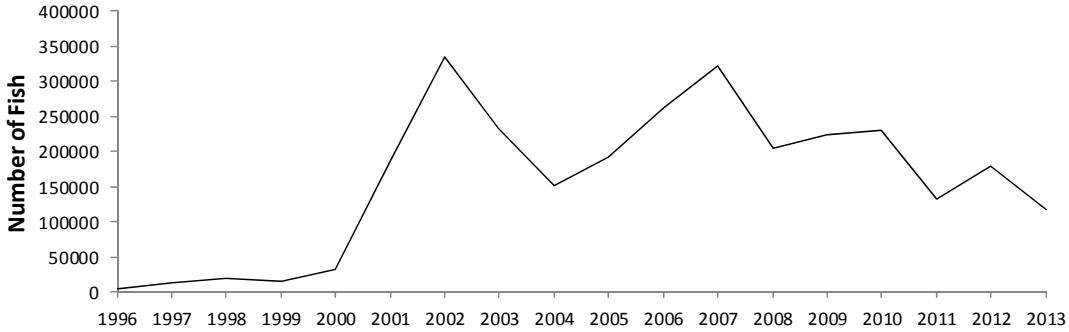
Year	Sets
1996	531
1997	1,533
1998	1,762
1999	2,112
2000	2,814
2001	4,801
2002	6,872
2003	6,221
2004	4,853
2005	4,359
2006	5,068
2007	5,921
2008	4,754
2009	4,911
2010	4,537
2011	3,847
2012	4,208
2013	3,324

Figure 3. Number of Hooks Set by the American Samoa Longline Fleet by Year



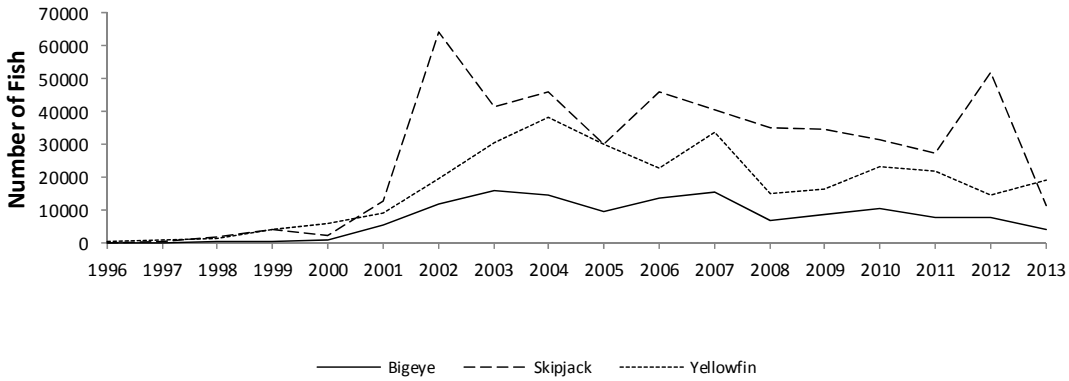
Year	Thousands of Hooks
1996	100
1997	420
1998	773
1999	916
2000	1,335
2001	5,795
2002	13,096
2003	14,165
2004	11,742
2005	11,129
2006	14,261
2007	17,556
2008	14,444
2009	15,077
2010	13,184
2011	10,966
2012	12,109
2013	9,917

Figure 4. American Samoa Longline Albacore Catch by Year



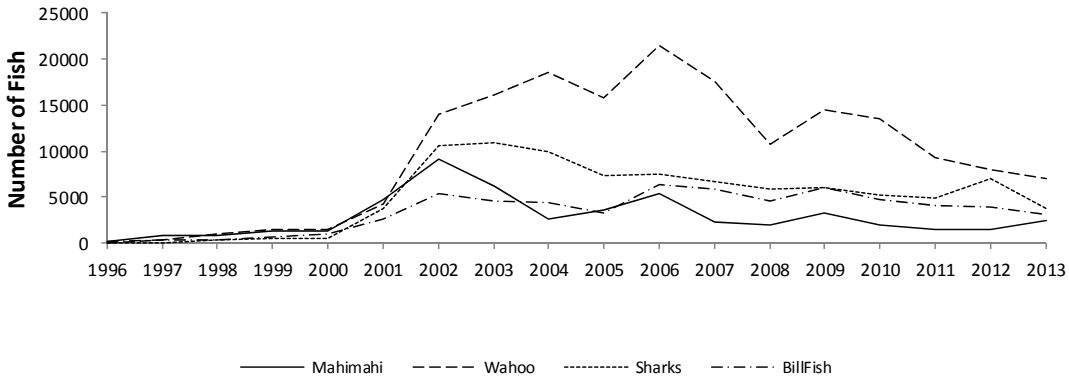
Year	Catch
1996	4,028
1997	13,077
1998	19,760
1999	15,654
2000	32,218
2001	187,141
2002	333,595
2003	232,439
2004	151,338
2005	192,637
2006	263,091
2007	321,890
2008	205,447
2009	223,099
2010	229,617
2011	132,506
2012	179,282
2013	117,555

Figure 5. American Samoa Longline Tuna Catch by Year



Year	Bigeye	Skipjack	Yellowfin
1996	132	6	645
1997	154	428	945
1998	324	2,039	1,367
1999	538	4,384	4,374
2000	947	2,463	6,061
2001	5,351	13,026	9,391
2002	11,749	64,400	19,499
2003	16,131	41,522	30,421
2004	14,762	45,901	38,142
2005	9,763	30,177	30,073
2006	13,512	45,855	22,624
2007	15,533	40,405	33,901
2008	7,059	35,170	14,996
2009	8,743	34,534	16,541
2010	10,512	31,484	23,105
2011	7,674	27,412	21,895
2012	7,826	51,994	14,591
2013	4,247	11,540	19,096

Figure 6. American Samoa Longline Catch of Miscellaneous Pelagic Fish by Year

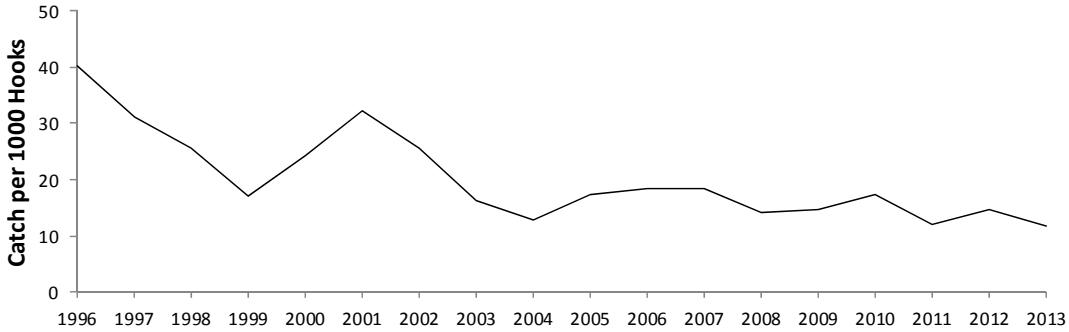


Year	Mahimahi	Wahoo	Sharks	Billfish
1996	227	82	65	158
1997	843	347	96	372
1998	892	1,061	409	405
1999	1,313	1,539	510	641
2000	1,325	1,463	497	997
2001	4,813	4,208	3,690	2,594
2002	9,181	13,948	10,539	5,394
2003	6,265	16,051	10,968	4,543
2004	2,557	18,514	9,956	4,449
2005	3,623	15,796	7,331	3,269
2006	5,309	21,426	7,521	6,300
2007	2,249	17,568	6,720	5,796
2008	1,938	10,720	5,853	4,519
2009	3,245	14,519	5,968	6,086
2010	1,955	13,586	5,159	4,796
2011	1,412	9,334	4,939	4,027
2012	1,425	7,943	7,042	3,886
2013	2,444	6,950	3,832	3,039

Figure 7. American Samoa Longline Total Catch per 1000 Hooks by Year

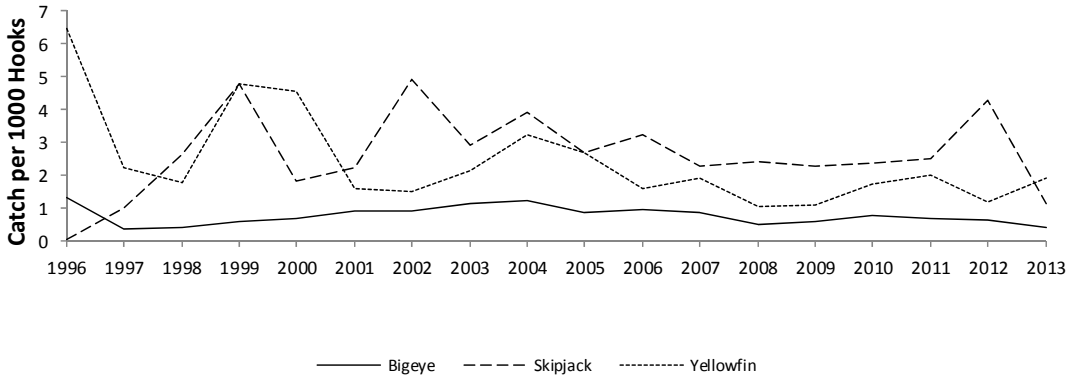
Year	Catch per 1000 Hooks
1996	53.59
1997	38.96
1998	34.21
1999	32.24
2000	34.75
2001	40.11
2002	36.61
2003	26.15
2004	25.23
2005	26.73
2006	27.62
2007	25.94
2008	20.29
2009	21.42
2010	25.04
2011	19.81
2012	23.65
2013	17.91

Figure 8. American Samoa Longline Albacore Catch per 1000 Hooks by Year



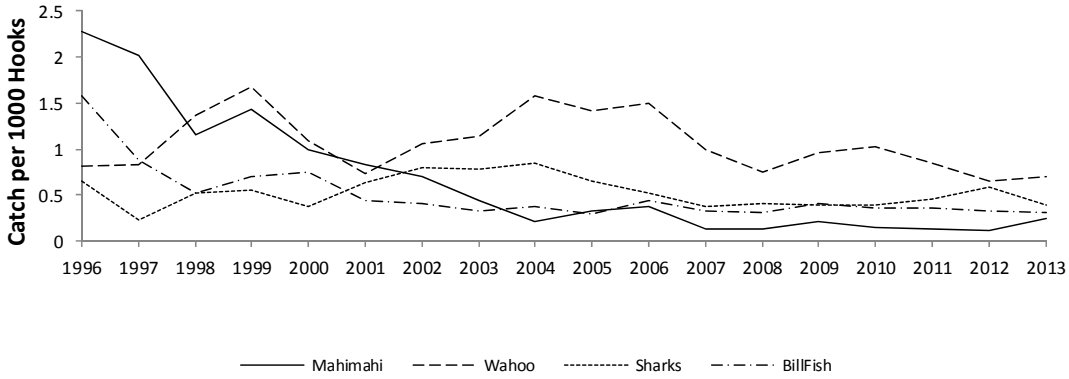
Year	Catch per 1000 Hooks
1996	40.28
1997	31.16
1998	25.55
1999	17.09
2000	24.14
2001	32.29
2002	25.47
2003	16.41
2004	12.89
2005	17.31
2006	18.45
2007	18.34
2008	14.22
2009	14.80
2010	17.42
2011	12.08
2012	14.81
2013	11.85

Figure 9. American Samoa Longline Tuna Catch per 1000 Hooks by Year



Year	Bigeye	Skipjack	Yellowfin
1996	1.32	0.06	6.45
1997	0.37	1.02	2.25
1998	0.42	2.64	1.77
1999	0.59	4.79	4.77
2000	0.71	1.85	4.54
2001	0.92	2.25	1.62
2002	0.90	4.92	1.49
2003	1.14	2.93	2.15
2004	1.26	3.91	3.25
2005	0.88	2.71	2.70
2006	0.95	3.22	1.59
2007	0.88	2.30	1.93
2008	0.49	2.43	1.04
2009	0.58	2.29	1.10
2010	0.80	2.39	1.75
2011	0.70	2.50	2
2012	0.65	4.29	1.21
2013	0.43	1.16	1.93

Figure 10. American Samoa Longline Catch of Other Pelagic Fish per 1000 Hooks by Year



Year	Mahimahi	Wahoo	Sharks	Billfish
1996	2.27	0.82	0.65	1.58
1997	2.01	0.83	0.23	0.89
1998	1.15	1.37	0.53	0.52
1999	1.43	1.68	0.56	0.70
2000	0.99	1.10	0.37	0.75
2001	0.83	0.73	0.64	0.45
2002	0.70	1.07	0.80	0.41
2003	0.44	1.13	0.77	0.32
2004	0.22	1.58	0.85	0.38
2005	0.33	1.42	0.66	0.29
2006	0.37	1.50	0.53	0.44
2007	0.13	1	0.38	0.33
2008	0.13	0.74	0.41	0.31
2009	0.22	0.96	0.40	0.40
2010	0.15	1.03	0.39	0.36
2011	0.13	0.85	0.45	0.37
2012	0.12	0.66	0.58	0.32
2013	0.25	0.70	0.39	0.31